

In the Claims:

Cancel claim 1 without estoppel or disclaimer of the subject matter thereof.

1.-2. (Cancelled)

3. (Previously Presented) A method for fixing a cardiac electrode on the exterior of a patient's heart, comprising the steps for:

temporarily positioning an electrode at target locations about the heart;

sensing electrical signals on the electrode at different target locations about the heart;

analyzing a selected parameter from the electrical signals sensed on the electrode at the different target locations to determine the maximum interval between left and right ventricular contractions;

determining from the analysis of a selected parameter a preferred one of the different target locations for attachment of a cardiac electrode; and

fixing a cardiac electrode on the exterior of the patient's heart at the preferred one target location.

4. (Previously Presented) A method for fixing a cardiac electrode on the exterior of a patient's heart, comprising the steps for:

temporarily positioning an electrode at target locations about the heart;

sensing electrical signals on the electrode at different target locations about the heart;

analyzing a selected parameter from the electrical signals sensed on the electrode at the different target locations to determine a maximum depolarization interval;

determining from the analysis of a selected parameter a preferred one of the different target locations for attachment of a cardiac electrode; and

fixing a cardiac electrode on the exterior of the patient's heart at the preferred one target location.

5.-6. (Cancelled)

7. (Previously Presented) A method for fixing a cardiac electrode on the exterior of a patient's heart, comprising the steps for:

temporarily positioning an electrode at different target locations about the heart;

supplying pacing signals to the electrode at each target location;  
detecting activity of the patient's heart including monitoring ejected volume in response to pacing signals applied thereto at each target location;

analyzing the detected activity to determine a preferred one of the different target locations for applying pacing signals; and

fixing a cardiac electrode on the exterior of the patient's heart at the preferred one target location for supplying pacing signals thereto.

8.-11. (Cancelled)

12. (Previously Presented) Apparatus for performing a surgical procedure on the heart of a patient through a working cavity in tissue between the heart and an entry incision, the apparatus comprising:

an instrument including a guide channel that houses a cardiac lead to extend between distal and proximal ends thereof, and including a suction port positioned on the distal end of the instrument for contacting a target site on the heart;

a suction channel within the instrument connected to the suction port and disposed to connect to a source of suction;

at least one electrode disposed at a surface of the suction port that contacts the heart; and

the guide channel including coaxial mating segments each having a longitudinal slot extending between distal and proximal ends thereof and being reconfigurable in response to relative rotation of the segments for aligning the slots to release the cardiac lead therefrom for leaving the cardiac lead anchored to the heart as the instrument is removed away from the cardiac lead.

13. (Original) Apparatus according to claim 12 in which the guide channel is axially slidable relative to the suction port for extending a distal end of the cardiac lead to contact the heart.

14. (Previously Presented) Apparatus for performing a surgical procedure on the heart of a patient through a working cavity in tissue between the heart and an entry incision, the apparatus comprising:

an instrument including a guide channel that houses a cardiac lead to extend between distal and proximal ends thereof, and including a suction port positioned on the distal end of the instrument for contacting a target site on the heart;

a suction channel within the instrument connected to the suction port and disposed to connect to a source of suction;

at least one electrode disposed at a surface of the suction port that contacts the heart;

the guide channel includes an elongated slot extending between distal and proximal ends thereof and is reconfigurable for selectively releasing the cardiac lead retained therein for leaving the cardiac lead anchored to the heart as the instrument is removed away from the cardiac lead.

15. (Original) Apparatus according to claim 14 in which the elongated slot is exposable by proximally sliding an upper segment of the guide channel relative to a lower segment thereof that is positioned relative to the suction port for exposing the slot in the lower segment between distal and proximal ends thereof.

16. (Previously Presented) Apparatus according to claim 12 in which the one electrode at said surface of the suction port is connected to a conductor that extends between the distal and proximal ends of the instrument.

17. (Previously Presented) Apparatus for performing a surgical procedure on the heart of a patient through a working cavity in tissue between the heart and an entry incision, the apparatus comprising:

an endoscopic cannula configured for passing through the entry incision and working cavity toward the heart;

a suction attachment supported by the endoscopic cannula for contacting a target site on the heart under visualization through the endoscope; and

a support channel for a cardiac lead that is disposed on the suction attachment and that is selectively configurable as a closed channel for confining a cardiac lead therein or as a channel open longitudinally between proximal and distal ends thereof for releasing a cardiac lead therefrom.

18. (Previously Presented) Apparatus according to claim 17 including a cardiac lead connected to an electrode disposed at a surface of the suction attachment to contact the heart, the cardiac lead extending along the support channel in the closed configuration to the proximal end thereof for connecting the electrode to a utilization circuit.

19. (Original) A surgical procedure for the placement of a cardiac lead in the heart of a patient under visualization through an endoscope by a delivery device including a cardiac lead clamp, a guide channel and a needle and at least one angled suction port at the distal end of a closed cannula of the delivery device, the surgical procedure comprising:

attaching the suction port of the delivery device to the patient's heart in response to applied suction for stabilizing the delivery device against the surface of the heart;

advancing the needle forward from the delivery device to create an incision in the heart;

clamping the cardiac lead into place by the cardiac lead clamp;

advancing the guide channel containing the cardiac lead along the needle into the heart incision;

visualizing through the endoscope the placement of the cardiac lead into the heart;

anchoring the cardiac lead to the heart;

removing suction to release the delivery device containing the needle and guide channel from the heart;

unclamping the cardiac lead from the cardiac lead clamp;

removing the guide channel from the delivery device while withdrawing the needle from the heart;

removing the delivery device from the patient; and

removing the endoscope assembly from the patient while leaving the cardiac lead securely anchored in the heart.

20. (Previously Presented) The surgical procedure of claim 19 wherein anchoring further comprises:

rotating the cardiac lead from a location proximal the distal end thereof and spaced from the patient.

21. (Original) The surgical procedure of claim 19 wherein visualizing further comprises:

partially withdrawing the guide channel sufficiently to expose a position of the cardiac lead near the distal end thereof.

22. (Original) An apparatus for the placement of a cardiac lead in a heart of a patient, the apparatus comprising:

an endoscope assembly to provide visualization during placement of the cardiac lead;

an instrument channel eccentrically attached to the endoscope assembly;  
and

a delivery device for delivering and placing a cardiac lead in a heart of a patient, the delivery device comprising:

- a housing;
- an elongated body attached to the housing and extending distally therefrom;
- a needle slidable along the elongated body for insertion into a heart;
- a clamp disposed within the housing for selectively grasping the cardiac lead;
- an actuation arm slidable disposed within the housing; and
- a guide channel attached to the actuation arm and slidable along the needle to contain a cardiac lead during placement of the cardiac lead into the heart.

23. (Original) The delivery device of claim 22 wherein the elongated body further comprises:

at least one angled suction port at the distal end of the elongated body for suction attachment to the surface of the heart.

24. (Original) The delivery device of claim 22 wherein the guide channel is angled at the distal end.

25. (Original) The delivery device of claim 22 wherein the guide channel is disposed to selectively confine the cardiac lead.

26. (Original) The delivery device of claim 22 wherein the guide channel is a substantially hollow tubular body.



27. (Original) The delivery device of claim 22 wherein the guide channel is a substantially planar body.

28. (Original) The delivery device of claim 22 wherein the needle is a substantially hollow tubular body.